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Food Security's Social Network

By Leah Samberg

The number of chronically undernourished people in the world is rising again, as crises like climate change and violent conflict weaken food security. To reverse this trend, farmers and pastoralists need technology to help rebuild the social networks that form the basis of agricultural resilience.

In 2015, when the United Nations Sustainable Development Goals were officially adopted, the clock began ticking on an ambitious goal: ending global hunger by 2030. At the time, that target seemed achievable; during the previous 15 years, the number of undernourished people on the planet had been reduced by half, a staggering achievement attributed largely to international investment in agricultural and economic infrastructure.

And then the world got hungrier again; in 2016, the number of people without enough to eat increased to 815 million, up from 777 million the year before. What happened?

Part of the answer is as old as civilization itself: droughts, floods, conflict, and displacement have hurt harvests and weakened output. But a more intangible factor is no less important: many of the networks on which farmers have traditionally depended to cope with these disasters have been lost or degraded.

Ending global hunger is not just about breeding drought-resistant corn; it is also about having a plan for when that corn fails anyway. In other words, it is as much about reimagining social networks as it is about deciding what goes into the ground.

For the world's poorest smallholder farmers and pastoralists, unpredictability is the only constant. To mitigate risk, people in rural areas have always relied on their personal networks for information to help them weather crises, improve productivity, and limit crop losses. In return, these relationships have facilitated the exchange of information and goods, diversified diets, strengthened farming techniques, and guarded against hunger.

Today, though, farmers' personal networks are weakening. Farms are being hit more frequently by severe weather, and violent conflict is increasing in poverty-stricken regions; these and other variables are uprooting farmers everywhere. While people have always left their homes in search of safety or opportunity, a record number of people currently are on the move.

All of these changes are negatively affecting traditional social structures that communities depend on for survival, and insufficient attention is being paid to these structures' role in ensuring food security. If global hunger is to be eradicated, the underpinnings of rural resilience must be supported, expanded, and diversified.

One of the best ways to do this is by investing in new technologies that enable farmers to connect with information and institutions that can decrease uncertainty and mitigate risk.

Also in this Issue:

According to a 2017 working paper by the CGIAR Research Program on Climate Change, Agriculture, and Food Security, some of the most promising innovations in rural agricultural are technology- and service-based. With access to data, markets, and financial services, farmers can plant, fertilize, harvest, and sell products more effectively.

At the moment, these types of innovations are not featured prominently in most hunger-alleviation strategies. But that is slowly changing, especially as more people in emerging economies connect to mobile networks, and apps designed to collect and share agricultural information become increasingly accessible.

For example, in Egypt, Sudan, and Ethiopia, local extension services are delivering real-time weather data to vegetable farmers via SMS. In West Africa, private companies such as Ignitia are expanding the accuracy and precision of SMS weather alerts to remote farmers.

In Mongolia, rural herders receive information about disease outbreaks to help them maintain the health of their livestock. And farmers throughout the Global South are turning to SMS-based services for technical support that allows them more easily to adopt new crops and growing techniques, with benefits for both natural resources and household income and nutrition.

Connectivity also improves the functioning of markets by allowing farmers and herders to access accurate price information, coordinate transport and other logistics, and facilitate easier exchange of perishable but nutritious foods such as animal products and vegetables. Mobile money and price information also enable pastoralists to adjust herd sizes to changing environmental conditions, while enabling farmers to secure seeds and fertilizer for future harvests.

Furthermore, by enabling the quick and secure transfer of funds, mobile-banking services allow producers to access markets more efficiently, reduce their transaction costs, and tap into higher-value market sectors. Mobile payment systems are also facilitating remittances from urban to rural areas, an increasingly important component of rural livelihoods.

Of course, the mere existence of this technology will not end hunger. The challenge is to broaden access to all of these tools, and to ensure that they meet the needs of the farmers who use them. This demands that mobile technologies take into account differences in gender, education, and resource levels among farmers, and are responsive to changing circumstances. The impact and success of these tools and programs should be monitored and evaluated, with ineffective approaches being improved or replaced.

I've conducted research in rural communities around the world, and one of the features they all have in common is the difficulty that farmers and pastoralists confront in accessing reliable information about markets, weather, and financing. With neighbors on the move, and climate change a growing concern, traditional information networks are no longer sufficient. Farmers everywhere, but especially in developing economies, need the support of digital communities.

For hundreds of millions of people, information is the difference between food security and hunger. But, amid the triple threats of climate change, violent conflict, and mass migration, how that information is gathered and shared is changing. Farmers' personal networks are now global and online. To feed a rapidly changing world, we must use new technology to re-imagine the oldest form of risk mitigation: community.

Leah Samberg is a research scientist with the Global Landscapes Initiative at the University of Minnesota's Institute on the Environment.

Project Syndicate

Koi story: Priceless Japanese Fish Make Global Splash

By Etienne Balmer

Carp are displayed in plastic bags during a contest in Tokyo. Hand-reared for their color and beauty, koi have become an iconic symbol of Japan that can sell for hundreds of thousands of dollars and even participate in fish beauty contests. | AFP-JIJI

AFP-JIJI

Hand-reared for their color and beauty, koi carp are an iconic symbol of Japan that can sell for hundreds of thousands of dollars and even participate in fish beauty contests.

The nation's koi were brought to the world's attention recently when visiting U.S. President Donald Trump was snapped unceremoniously dumping the last of a box of feed into a palace pond in Tokyo.

But the fish have for decades been popular in Japan, where top breeders take their most prized specimens (known as nishikigoi) to highly competitive "beauty parades."

At one such competition in Tokyo judges in sharp suits, notebooks in hand, strode around tanks arranged in line along a

Judges grade koi carp during a 'nishikigoi' (colored carp) contest in Tokyo on November 24, 2017. | AFP-JIJI

Hand-reared for their color and beauty, koi carp have become an iconic symbol of Japan that can sell for hundreds of thousands of dollars. | AFP-JIJI

Baby koi carp in a water tank at the Kurihara Fish Farm in Kazo, Saitama Prefecture, on November 30, 2017. | AFP-JIJI

pedestrian street, where the valuable koi strutted their stuff. They come in all the colors of the rainbow: pearly white, bright red, cloudy-gray, dark blue, gleaming golden yellow.

But it is the curvature of the fish that accounts for 60 percent of the final score, explained competition organizer Isamu Hattori, who runs Japan's main association for breeders of carp. Color and contrast make up another 30 percent, he said.

And the final 10 percent? Hinkaku — a concept that is tricky to define and even harder to judge, best translated as the "presence" or "aura" of the fish.

"Hinkaku. It's either there in the genes at birth, or it's not," mused Mikinori Kurikara, a koi breeder in Saitama, who says he can spot it in fish when they reach 8 or 9 months old.

"Put it this way, it's like looking after your own children every day. You care for your kids and want them to grow healthy. In the same way, you take care of these fish, appreciate them and adore them," he said.

At his farm, thousands of tiny nishikigoi — which translates roughly as colored carp — dart around deep basins of carefully purified water, meticulously divided by age and color.

A less glorious fate awaits the other koi that have not been fortunate enough to catch the eye of the breeder: they are sold off as feed for tropical fish.

"It's a really delicate job, really difficult. Everything matters: the ground, the water quality, the food," explained the 48-year-old, who took over the farm from his father and is training his son, who is half his age, in the subtle arts of koi breeding. "We have many secrets," he added mischievously. "But even if we were to let them slip, it wouldn't work. You have to be able to feel it."

These days any self-respecting traditional Japanese garden has plenty of colorful koi gracing its ponds, but it is a relatively recent tradition. Around 200 years ago, villagers in the mountainous region around Niigata Prefecture started to practice genetic engineering without knowing what they were doing.

For the first time they began to cross-breed rare colorful carp, not for food but for pure aesthetic value. The craze for nishikigoi gradually took over the whole of Japan and then spread into other parts of Asia.

They are especially popular in China, where carp swimming against the tide symbolize the idea of perseverance leading to riches — rather like people climbing the social ladder, said Yutaka Suga, professor at the Institute for Advanced Studies on Asia at the University of Tokyo. Today, koi is big business and Japanese exports are booming — 90 percent of domestic production is exported and sold at auction.

In 2016 Japan exported a record 295 tons of koi, generating turnover of ¥3.5 billion ($31 million), an increase of almost 50 percent from 2007, according to the agriculture ministry. As for individual carp, "the prices have become insane," said carp association boss Hattori. "Today a 2-year-old carp can sell for ¥30 million each ($265,000), whereas 10 years ago ¥2 million was already a very good price," he said.

Like racehorse owners, many foreign owners leave their prized possessions in their home Japanese farms so they can compete in the most prestigious fish pageants, which are only open to domestic rearers.

One such owner, Chinese koi collector Yuan Jiandong, was in Tokyo to cheer on some of his own carp.

"It's not a way of making money. It's a way of spending it for fun," laughed the pharmaceutical boss from Shanghai.

But owning koi is so much more than a vulgar display of wealth, he said. "When you see these beautiful fish gliding around in your pond, you forget the stresses of daily life and you find peace of mind."

And you can't put a price on that.

Taipei Times

Global Food Waste Could Rise by A Third by 2030 - Study

By Sonia Elks

Food waste could rise by almost a third by 2030 when more than 2 billion tonnes will be binned, researchers said on Tuesday, warning of a "staggering" crisis propelled by a booming world population and changing habits in developing nations.

The United Nations has set a target of halving food loss and waste by 2030. But the Boston Consulting Group (BCG) study found that if current trends continued, it would rise to 2.1 billion tonnes annually - an amount worth $1.5 trillion.

"We are seeing a real crisis at a global level," one of the study's authors Esben Hegnsholt told the Thomson Reuters Foundation.

"The amounts of waste and the social, economic and environmental implications are serious if we don't change the trajectory. When we fight food loss and waste, we also fight hunger, poverty and global warming."

Around a third of the world's food is lost or thrown away each year. Currently, we waste 1.6 billion tons of food annually, worth about $1.2 trillion dollars.

Much of the projected increase was down to a swelling world population, with more people resulting in more waste, said Hegnsholt, a partner and managing director at the management consultancy.

Household waste will increase in developing countries as consumers gain more disposable income, said the report, which identified five key changes which it said could save nearly $700 billion in lost food.

They included more awareness among consumers, stronger regulations and better supply chain efficiency and collaboration along the food production chain.

Liz Goodwin, director of the food loss and waste program at the World Resources Institute, said the report raised serious issues but oversimplified some of the solutions.

"It's connected with the way our lives have changed and the fact that food is now so much cheaper," she said, also citing a growing demand for convenience and a lack of cooking skills among younger generations.

Goodwin said she believed measures to cut wastage were having an effect, and the world would at least be on the way to meeting the 50 percent reduction target by 2030.

Consumers, businesses and regulators would all have to play a role in driving change, she said.

"We need a shift in our attitudes to food waste – I think we need to get to the point where it just isn't acceptable to throw food in the bin," she said.

Reuters

Taiwanese Develops App Aimed at Reducing Food Waste

By Jake Chung/Staff writer, with Central News Agency (CNA)

An undated photograph shows entrepreneur Ho Wen-hsin, left, and a business partner holding a tablet and a laptop computer running the food logistics application developed by Ho's team. Photo: CNA / courtesy of Ho Wen-hsin

ELECTRONIC HELPER: The first client was a tofu maker who had to visit clients to take orders; the team created an order-taking and accounting system for the shop

A team headed by Taiwanese entrepreneur Ho Wen-hsin has launched a mobile application to help reduce food waste and facilitate direct orders between restaurants and wholesalers.

The impetus was to find a new purchasing method for traditional eateries and make the purchase information transparent for producers, wholesalers and restaurants, which would increase their efficiency when deciding what to order, Ho told the Central News Agency (CNA) in an interview published on August 19.

However, a lack of funding meant the team found it difficult to land a big client, so it began by offering the app to vendors in traditional markets and customizing it to meet their needs, she said.

Their first client was a tofu maker in Yilan County, who had more than 200 customers placing daily orders, but the owner had to personally visit every customer to take orders, quote prices and manage the accounts, she said.

We won the client over by providing a semi-automated system that could take orders and handle an accounting system, which greatly improved the tofu shop's efficiency, she said.

Team members were surprised to learn that many breakfast shops still used traditional methods such as cashiers to handle client payments, so they promoted the system as a much-needed digital secretary, she said.

By first targeting providers, the team was later able to win over the restaurants that were buying from those providers, she said.

The team has updated its app to include a service that allows restaurateurs to see what is offered by other suppliers and the prices, allowing them to diversify their food sources, Ho said.

The team's system is based on hand-held device applications, and it is more mobile and practical than the customized added-value services that are part of the Enterprise Resource Planning system used in the hotel industry, which

requires a desktop computer to run, she said.

The team's next step is to place providers and restaurants on the same platform, which would help providers see what produce and food items are needed, which could help them reduce over-production of certain items, which thereby reducing food waste, she said.

The team is looking forward to providing more services aimed at reducing the nation's food waste problem by becoming a registered company, Ho said.

Taipei Times

Research Team Extends Banana Shelf Life by 23 Days Using Nanotechnology

By Lin Chia-nan/Staff reporter

A man on June 8, 2018 works next to a pile of bananas that are to be sent to livestock or composting farms in accordance with Council of Agriculture regulations. | Central News Agency (CNA)

Taiwanese researchers have developed a method using nanotechnology to extend the shelf life of bananas for 23 days.

The team was led by National Chung Hsing University professor Lin Yao-tung.

Exhibiting the team's techniques at a Ministry of Science and Technology pavilion at Computex Taipei on June 6, 2018, Lin said the technique is commercially feasible and more than 80 businesses, including household electric appliance suppliers, have approached the team seeking collaboration.

While plunging banana prices have grabbed media attention over the past few months, it is not a new problem, Lin said, adding that he has spent nine years researching techniques to extend the shelf life of various fruits.

Lin said he missed Taiwan's various kind of high-quality bananas when studying in the US, adding that banana exports are unfortunately much weaker than local consumption.

Chilean agricultural products are exported an average distance of 11,157km and those of New Zealand an average of 10,765km, while Taiwanese agricultural products are exported an average of 1,793km, highlighting the nation's need to develop more advanced techniques for keeping fruit fresh, he said.

Working with researchers in plant pathology, animal science and other domains, the team used mineral materials and agricultural waste to develop a coating for cardboard cases that slows down the ripening process by insulating the bananas during transportation, he said.

The results showed that the coating extended the shelf life of bananas, he said, adding that the technique could also be used in warehouse management systems.

The team also plans to collaborate with information engineers in developing an automated system for monitoring crops as they ripen, Lin said, adding that the system might soon be turned into a mobile app for farmers.

Asked about the cost of the technique, Lin said that academics spend less time thinking about business affairs.

The team might seek cooperations with companies that have expressed an interest in their technology, he added.

Lin teaches in the university's Department of Soil and Environmental Sciences, where two graduate students, Tu Kai-fen and Yan Li-ting, have started an agricultural technology company named Agritech.

Taipei Times

As Asians Get Rich and Healthy, 'Smart Crops' Replace Rice on Future Menus

By Rina Chandran

Lunchtime in Taipei's Ximending district is a test of wills and patience as tourists and locals jostle at restaurants and street stalls to choose from steamed and fried dumplings, flat and thin noodles, stuffed pancakes, grills and desserts.

In this foodie haven, one item makes only an occasional appearance on menus and on plates - rice.

Once a staple of Taiwanese diets, rice consumption per person has fallen more than two-thirds in 50 years, according to the United Nations' Food and Agricultural Organization (FAO), as "smart crops" and "super foods" muscle their way onto plates.

It is the steepest drop in Asia but a trend across the continent as urbanization, rising incomes, climate change and concerns about health and food supplies drive a push for alternatives for the future such as millets and more protein.

"I ate a lot of rice when I was younger but now I eat more vegetables, fish and meat. It's healthier," said Guan-Po Lin, 24, who moved to Taipei for university.

"People are spending more on food, and they want to eat healthy, and rice is not seen as a healthy choice."

About 90 percent of global rice production and

Street vendors in Bangkok, Thailand where urbanisation, rising incomes and concerns about health are driving a move towards more protein-rich alternatives to the staple food, rice. May 10, 2018. Thomson Reuters Foundation\\Rina Chandran

A street vendor in Taipei, Taiwan where urbanisation, rising incomes and concerns about health are driving a move towards more protein-rich alternatives to the staple food, rice. April 11, 2018. Thomson Reuters Foundation\\Rina Chandran

consumption is in Asia, home to 60 percent of the world's population.

Yet, as trends in Taiwan, Japan, South Korea and Hong Kong show, consumption is set to drop significantly as diets change.

Per capita consumption has fallen about 60 percent in Hong Kong since 1961, and by almost half in Japan. In South Korea, it has slid 41 percent since 1978, FAO data showed.

Alongside that the consumption of fish, meat, dairy, fruits and vegetables has risen significantly.

Rice will still be the single most important crop in the region, key in diets and a symbol of Asian culture, but it will not be as dominant in coming years as new foods are snapped up, said David Dawe, a senior economist at the FAO in Bangkok.

"It is the future for Asia - well-nourished people who can perform better. You cannot get that by filling up on rice; you need more fish, meat, fruits and vegetables," he said.

RITUAL STATUS

Rice is said to have first been domesticated in the Yangtze River valley in China more than 10,000 years ago.

In Asia, rice was consumed mostly by the wealthy and did not become as ubiquitous until the Green Revolution of the 1960s, when governments introduced higher yielding seeds and better fertilisers to improve output and feed expanding populations.

In Taiwan, millets were the staple of indigenous and rural people, and had a higher status in ritual ceremonies than rice.

In India, malnutrition is one reason the government is pushing millets which are richer in protein, fiber and micronutrients than rice or wheat, said S.K. Gupta, a principal scientist at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in Hyderabad.

Also millets need less water and can grow in saline soil and withstand warmer climate, crucial factors as temperatures and sea levels rise in South Asia.

"Historically, a large section of the population was eating millets and maize, but when they moved to urban areas, they switched to rice and wheat," Gupta said.

"Consumers can be encouraged to go back to millets if they are more readily available, and farmers will grow more if they get better prices. It's already happening," he told the Thomson Reuters Foundation.

CRAFT BEERS

The shift away from rice in wealthier Asian nations is explained by Bennett's Law, which argues that as income increases people spend proportionately less on starchy staples such as rice, FAO's Dawe said.

Rice is regarded as inferior when per capita income reaches $2,364 in Asian nations, according to FAO's estimates.

Changes are already evident in mainland China and some southeast Asian countries, where people are eating a more protein-rich diet with more meat and fish, Dawe said.

In the Philippines, one of the world's biggest importers of rice, the government has considered substitutes such as corn, banana, sweet potato, cassava, taro and adlai - an heirloom grain also known as Job's Tears or Chinese Pearl Barley.

At the other end, food companies and chefs are responding to the demand for healthier diets with millets in bread, pasta, even craft beers.

"It took some time to get people excited about these lesser known, stereotypically inferior grains like ragi (finger millet), jowar (sorghum) and kodo," said Thomas Zacharias, chef partner at The Bombay Canteen, among Asia's top restaurants.

"We showcased them in new and interesting ways that appealed to the current generation, and there's definitely been a shift," said Zacharias, whose barley and jowar salad with a hung curd dressing is a hot favorite of diners in Mumbai.

Marketing helps. Production of quinoa increased by more than 70 percent from 2000 to 2014 in the top growing countries, according to the FAO, because it was sold as a "super food".

SMALLER FOOTPRINT

The FAO promotes rice alternatives as "smart crops" to make them more attractive.

It is also promoting aquaculture - farming shrimp, carp and tilapia alongside rice - to help farmers improve incomes while making fish more cheaply available.

"Asian farmers will not get rich growing rice on a small farm," said Kundhavi Kadiresan, FAO's Asia representative.

"Countries are also starting to take the issues of undernutrition, micronutrient deficiency and obesity seriously. Sticking to rice means that fruits and vegetables are not as easily available and affordable as they could be."

Malnutrition and climate change are also top concerns for rice biologists and breeders, said Rod Wing, a University of Arizona professor who recently completed the genome sequencing of seven wild rice varieties.

"Rice feeds the poorest of the poor, and as long as there's overpopulation and poverty, people are going to be eating rice," said Wing, referring to the fact that 60 percent of the world's hungry are in the Asia Pacific.

"So it's important that we can grow varieties that have a higher nutritional value and a smaller environmental footprint."

For consumers like Lin in Taipei, rice is here to stay.

"We may eat less of it, but for my family, no meal is complete without rice," he said.

Thomson Reuters Foundation

Students Develop Fertilizer from Shōchū Distillation Remnants

Students in Kumamoto Prefecture have developed fertilizer from the distillation remnants of shōchu spirits that they hope will help farmers cut their use of chemicals on crops. | GETTY IMAGES

JIJI

Students in Kumamoto Prefecture have developed a low-cost method to cultivate photosynthetic bacteria for use as fertilizer using the distillation remnants of shōchū, a traditional Japanese liquor.

The student researchers, led by Aoi Koga, 24, from Sojo University's Graduate School of Engineering in the city of Kumamoto, hope their method will help farmers cut their use of chemicals and distillers save money through the reuse of the remnants left over from the distillation process called shōchū kasu.

In 2016, Koga produced a liqueur targeted at young women in collaboration with a distiller of rice-based Kumajochu shōchū, a specialty of the Hitoyoshi Kuma area in Kumamoto Prefecture.

At that time, she realized that disposing of shōchu kasu left after the distillation of mash made from fermented rice cost the shōchu-making industry millions of yen a year.

From her research, launched in April 2016, Koga found that the distillation remnants were rich in citric acid, which can be used to cultivate photosynthetic bacteria.

She and the other students, who were mentored by professor Hitoshi Miyasaka, an expert in the study of photosynthetic bacteria, tried to find the best method to grow it.

As a result of their research, which lasted for about a year, Koga's team discovered the most stable conditions for cultivating the bacteria to ensure the best quality and increase harvests.

In April 2018, Koga established a startup called Ciamo with three others to make and sell a photosynthetic bacteria culture kit, which contains the bacteria and shōchū kasu-based broth.

Ciamo was able to set the price of the kit, dubbed "Kuma Red," at about half the price of similar products thanks to the use of the low-cost materials. Some 40 farmers, mainly in the prefecture, have purchased the kit. The company aims to achieve ¥300 million in sales in the coming three years.

It is estimated that if a rice farmer uses fertilizer made using photosynthetic bacteria, its profit would increase by about ¥90,000 per 1,000 sq. meter of field thanks to a decline in the use of chemical alternatives and a rise in crop production.

Shōchū producers also welcome the development of the method to recycle their distillation residue, which is designated as industrial waste, because disposing of it by traditional methods is costly, the head of Toyonaga Shuzo, a distiller in the town of Yunomae, said.

Expressing hope to expand into overseas markets, Koga, who serves as president of Ciamo, said, "We're eager to use the power of microbes to reduce the use of pesticides and chemical fertilizers, even if only slightly."

Japan Times

ASEAN Banks Key to Regional Food and Water Security

By Jeanne Stampe

Climate risk is not just about large-scale visible impacts, such as cities being decimated by extreme weather events in the Philippines—or facing inundation risk in Thailand—it also includes the insidious threat to our food and water security and, therefore, Southeast Asia's socioeconomic stability. The creation of sustainable and resilient economies is essential to mitigating these risks, and banks are one of the most powerful levers to do this.

Food and Water Security at Risk

Climate change is already impacting food and water security. Not far from Southeast Asia, we have just witnessed the worst drought in a generation in Australia that has devastated huge swathes of grazing and crop land, leaving farmers struggling to feed their livestock and support their own families. Is this a glimpse into the future for ASEAN? Climate change is causing longer and more intense droughts as well as changes in temperature and soil quality, which further decimate crop yields. As sea levels rise, saltwater intrusion threatens coastal sources of groundwater, while land available for agriculture shrinks. These are the myriad of ways in which climate change is expected to threaten food and water security in Southeast Asia.

In the Central Western region of New South Wales, Australia, farmers continue to battle a crippling drought that many locals are calling the worst since 1902. Climate change is expected to threaten both food and water security in the region.
Photo: Brook Mitchell/Getty Images

The Use of Land for Food

On the other hand, the way we use land for food production is a key cause of climate change. We are witnessing increased unsustainable land clearing for the purpose of producing food, with the agriculture sector using 34 percent of the planet's land and agriculture, forestry and land use (AFOLU) accounting for up to 24 percent of all greenhouse gas emissions. Yet, resilient food systems depend on healthy forests and other ecosystems, which play a critical role in mitigating climate change and regulating water flow. In this way, we are threatening the very food production systems on which we depend, aggravating poverty, causing economic losses and creating geopolitical instability. The way in which we use land for food—where we recognize the intrinsic environmental value of land—the new black gold—must be part of the global climate solution.

How Can Banks Support Sustainable Land Use?

ASEAN banks are key to addressing regional climate risk and hold huge potential in financing sustainable food, energy and infrastructure systems in the region. As key financiers of the region's smallholders, small- to mid-caps and private companies in the food supply chain that are beyond the radar screen of institutional investors, they can tie the access to and cost of capital to sustainability criteria, in addition to other credit considerations, to incentivize sustainable business practices. In doing so, they create more resilience to climate risk in their loan portfolios, while ensuring that the businesses that they finance, especially those in high-impact sectors such as food, are part of the solution. For example, Bunge, an agribusiness company, has partnered with Santander Bank in Brazil to provide longer-term loans to soy farmers willing to commit to a no-deforestation approach.

Despite this, a recent report* by WWF and the National University of Singapore assessing 34 ASEAN banks found that the region's biggest banks are not fully capitalizing on that potential. They are aware of the impact that their businesses have on the environment and society, but their policies on managing environmental, social and governance (ESG) issues are mostly not disclosed. For example, only five banks recognized deforestation risk despite Southeast Asia being home to two key deforestation fronts in Greater Mekong and Borneo. Similarly, 30 banks did not disclose whether senior management has oversight of climate risks and opportunities, a key recommendation of the Task Force on Climate-related Financial Disclosures, which is increasingly backed by global investors and has specific recommendations, both for banks as well as for food and beverage companies. These findings suggest a significant untapped opportunity for banks to use their influence to move clients to proactively manage ESG impacts and risks, thereby managing the climate risks that may be accumulating in their loan portfolios.

More Green, Less Brown

One of the ways in which ASEAN banks can help future-proof ASEAN's food security and their own portfolios is by shifting financial flows away from unsustainable practices via the use of ESG policies and green financial products. And it is encouraging to see that progress has been made in this year's assessment compared to last year, particularly by Singaporean, as well as a few Malaysian and Thai banks.

However, although 22 banks disclosed sustainable banking products, only two of these banks have products that tie the cost of capital to performance against sustainability criteria. While these two sustainability-linked loans are to companies in food supply chains, demonstrating the ability to capture opportunities related to a sustainable food system, much more remains to be done. In particular, these loans need to become a material part of these companies' balance sheets, not just short-term working-capital facilities, and we need to see a more widespread uptake of such products. Furthermore, ESG products can only successfully contribute to the Paris Agreement and SDGs if loan portfolios as a whole are being realigned to a resource-efficient and low-carbon world. This will require more ambitious targets at the portfolio level.

Sustainable Land Use Is Critical to the Global Climate Solution

Food and water security are existential issues impacting all of us. Banks must take urgent steps to address key risks within the activities that they finance, such as climate, deforestation and water risk, and allocate capital to transform the region's food systems. Investors with ASEAN banks in their portfolios can also play a key role in supporting these recommendations and asserting their influence as shareholders through voting and engagement. Together with science-based NGOs, the finance sector can transform the way in which we use land to meet society's needs so that it becomes part of the global climate solution. This is critical for ASEAN to have a resilient and sustainable future and for banks to manage climate risk in their portfolios.

**The WWF Sustainable Banking in ASEAN report covers 34 banks across six ASEAN countries, namely Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam. More details can be found here and on WWF's Sustainable Banking Assessment (SUSBA) web-based tool.*

***A version of this piece was first published on Thomson Reuters. Brink*

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Agri-Parks to be a Focus for Southbound Policy

By Lee Hsin-fang and Sherry Hsiao/Staff reporter, with staff writer

The government is to partner with countries targeted by its New Southbound Policy to establish agricultural demonstration parks in those nations, sources said.

Taiwan is to work with Indonesia to build an agricultural demonstration area in West Java, a province near the capital, Jakarta, they said.

Initially, 400 hectares would be allocated to rice and raising ducks, but within three years the area would be expanded to 1,000 hectares, they added.

The Indonesian project would be the first of its kind for a New Southbound Policy nation, and the government would soon sign an official partnership agreement with the Indonesian Economic and Trade Office in Taipei, the sources said.

Taiwan is also to work with India, they said.

The Indian government, which in 2016 signed a memorandum of understanding on agricultural cooperation with Taiwan, has expressed a desire to collaborate on such a park, an unnamed government official familiar with the matter said.

Technical teams from Taiwan and India are to discuss the details in June 2018, and the demonstration area is expected to be established before the end of 2018, the official said.

Progress has also been made with Vietnam, sources said.

The Vietnamese government wants to develop high-tech agriculture and six months ago it proposed establishing a high-tech agricultural park with Taiwan's help on about 30 hectares in the suburbs of Ho Chi Minh City, they added.

Vietnam is interested in Taiwan's orchid industry technology and originally hoped to create an orchid park, but orchid growing involves plant variety rights, not to mention the industry is a "flagship industry" for Taiwan, Council of Agriculture Deputy Minister Chen Chi-chung said.

After visiting the council's Agricultural Research Institute, Vietnamese Representative to Taiwan Tran Duy Hai became interested in building a high-tech agricultural park in his nation, Chen said.

Which crops are to be included are still under discussion, but the council is planning to work on the project, he said.

Agricultural partnerships with countries targeted by the New Southbound Policy would differ based on the individual nation's needs, an unnamed government official familiar with the matter said.

These partnerships could mean building comprehensive agricultural demonstration areas, creating fertilizer factories or taking a high-tech approach, the official said.

The government hopes to turn such regional agricultural partnerships into overseas bases for food aid, increase the nation's trade volume to prevent an over-reliance on China and turn Taiwan into a hub for the development of agricultural talent in the region, they said.

Taipei Times

Farming to be Transformed by 2030

By Sok Chan

A farmer using his modernised farming technique. KT/Chor Sokunthea

Cambodia has set a target of modernising the agricultural sector to make it more competitive with high productivity in the next twelve years, Agriculture Minister Veng Sakhon says.

The government's vision in 2030 sees agriculture transformed to make it more competitive in the market, and to be sustainable to ensure food security, safety, and nutrition for Cambodians' wellbeing.

Mr Sakhon spoke at a regional workshop on April 18, 2018 on the role of mechanisation in strengthening smallholder resilience through the conservation of agriculture in Asia and the Pacific.

He said upgrading agriculture machinery to modern standards was the proper solution to strengthening and increasing productivity, reducing the labour force, and efficiently increasing the capacity of cultivated land to ensure food security and nutrition, boost the economy and reduce poverty.

"The Ministry of Agriculture has set two main goals," Mr Sakhon said.

"The first, is to boost the growth in agriculture by increasing productivity, diversification, competitiveness and commercialisation.

"The second is to boost the use of cultivated land, and to develop and manage the forestry resources and fisheries with sustainability."

Song Saran, the CEO of Amru Rice Cambodia, said that to boost farmers' productivity with a competitive market and to achieve sustainability in agriculture in 2030, Cambodia had to look at the market drivers, with quality and safety as well as market share.

The country had also to look at crops planning and diversification, and infrastructure such as irrigation systems, logistics and storage to support the whole supply chain.

He added that financing agriculture with low interest rates was also important for the supply chain, while up-to-date technology was needed to link farmers and end users.

Mr Saran said that farmers had to stay up to date with technology to modernise their produce and measure their production costs and yields.

"We have to offer more training to farmers to equip them with the knowledge to increase productivity as they lack knowledge to comply with the market demands," Mr Saran said.

"The government plays a crucial role to push these mechanism through public, private and producer partnerships to have a common goal in 2030 to develop sustainability in agriculture.

"If all relevant parties are on the same path, we will achieve high incomes in 2030," he said.

"We have to transform to market-driven from product-driven to make us competitive.

"We have to know the needs of the market. By doing so, we hope we can achieve the goals in 2030 if we have a proper plan, and strengthened regulations and law," he added.

Hean Vanhan, director-general of the ministry's general directorate of agriculture, said the agriculture labour force had dropped to about 40 percent while labour was getting expensive. Therefore, machinery would come to replace people.

He said that to modernise agriculture, all stakeholders from farmers, users, distributors, suppliers, importers and exporters had to be involved.

He said machinery would boost productivity and competitiveness in the agriculture sector. This meant that farmers would have low production costs and get more profit in the production chain.

"We have many mechanisms to support our vision in 2030," Mr Vanhan said.

"Currently, we have also changed the department of agriculture machinery to department of agriculture engineering.

"We also find more roles for machinery not only in growing but the irrigation systems of rice fields," Mr Vanhan said.

Data from the Ministry of Economy and Finance shows that growth in agriculture dropped to one percent in the last five years. It was 4.5 percent from 2008 to 2012 and 7.2 percent from 2003 to 2007.

Agriculture's share of Cambodia's gross domestic product was 27.1 percent in the last five years, down from 33.6 percent from 2008 to 2012.

The data also revealed that crops, animal production and fisheries which are sub-sectors in the agriculture sector, dropped to 1.1 percent growth from 2013 to 2017, down from 5.5 percent in 2008-20012 and 12.1 percent in 2003-2007.

Khmer Times

Farmers in Myanmar Reap Success with Apps

By Sok Chan

Agence France-Presse (AFP)

A free app on farmer San San Hla's smartphone is her new weapon in the war against the dreaded stem borer moth that blighted her rice paddy in southern Myanmar for the past two years.

As she watches her workers haul in this year's harvest, the 35-year-old is in a triumphant mood, ascribing her victory over the seasonal scourge to advice received via the app about effective pesticide use.

"We used to just farm the way our parents showed us," she said in her village of Aye Ywar west of Yangon. "But after getting the app, I now see how we should be doing it... it's better to use proper techniques rather than just working blindly."

Farmer San San Hla uses a mobile app as she works in a rice field on the outskirts of Yangon, Myanmar, on December 27, 2017. | AFP

San San Hla is among a growing cohort of farmers who are turning to technology to address the knowledge gap in a country where two thirds of the workforce are employed in agriculture.

The sector accounts for 28 percent of the country's GDP, but yields are low with farmers cut-off from modern technology under decades of isolationist junta rule. For people like San San Hla apps could be the answer.

They are providing farmers with up-to-date information on everything from weather, climate change and crop prices to advice on pesticides and fertilizers.

Chat forums are connecting farmers, allowing them to swap tips while experts are on hand to answer queries.

The "Green Way" app is the brainchild of two former agricultural students, who in 2011 set up a Web site for farmers, often working through the night to keep it updated.

However, at the time few farmers had Internet access, recalls Yin Yin Phyu, 28, explaining the "idea just didn't take off."

Then smartphones arrived and everything changed.

As Myanmar opened its doors, telecoms companies rushed in to grab market share, thrusting Myanmar beyond the era of desktop computers and old-style mobile phones.

The cost of SIM cards, once the tightly controlled reserve of the well-connected and special branch spies, plummeted from an unattainable US$3,000 in 2005 to US$1.50 in 2013.

Competitors practically gave away smartphone handsets as they fell over themselves to build up brand loyalty.

Mobile penetration stood at just seven percent in 2012. By the end of last year, smartphone penetration had rocketed to 80 percent.

A nascent tech hub followed and outside of agriculture, apps were created for everything from healthcare to Myanmar's parliament.

Farmers, many among the country's poorest, today find themselves with a mobile computer in their hands — a game-changer for the entrepreneurs behind "Green Way," who launched their app in 2016 and now employ 18 full-time staff.

"'Green way' is my dream to link farmers and experts," Yin Yin Phyu said. "The farmers can get help whenever they need."

About 70,000 farmers have already downloaded the app although she hears far more are accessing it through phone-to-phone sharing.

Greater productivity at Myanmar's farms could reshape both its economy and society, says 71-year-old agricultural expert Myo Myint.

"Many workers migrate to other countries because they can't make enough money to live from agriculture in Myanmar," he says. "Farmers need technology and investment."

A World Bank study for last year found farmers in some areas of the country still earn as little as US$2 per day.

Productivity is also relatively low with only 23kg of rice paddy generated in one day of work in Myanmar compared to 62kg in Cambodia, 429kg in Vietnam and 547kg in Thailand.

The founder of the "Golden Paddy" app says the new tech is not best suited to struggling farmers at the bottom of the ladder.

They do not have the time or resources to implement advice on changing seeds or fertilizer.

Instead, the apps are aimed at smallholder farmers to allow them to "become a little more commercial," Dutchman Erwin Sikma said.

Similar projects in other developing countries — in India and parts of Africa — are still reliant on old-style phones and information by SMS.

Myanmar now has the chance to leapfrog that era to become an agricultural trailblazer.

However, that also means the country is in uncharted territory.

"We have a lot of first-mover disadvantages," Erwin Sikma says. "It's a start-up in a completely new model in a completely new market or economy so we need all the help we can get."

Taipei Times

Okayama Researcher Boasts Nontropical Banana Success

Setsuzo Tanaka stands beside a banana plant that can survive cold weather, in December 2017 in the city of Okayama. | KYODO

Kyodo

Bananas grown in Okayama Prefecture, where the temperature drops below zero in winter, are attracting attention at home and abroad.

After some 40 years of research, Setsuzo Tanaka, 69, who had no farming experience, developed a method of making bananas survive cold weather by using plants that were slowly frozen. His work enables the cultivation of the fruit outside tropical or subtropical regions

"They look splendid, don't you think?" said Tanaka in December 2017, after the city of Okayama went through some extremely chilly days, as he showed off bunches of bananas at the greenhouse of an agricultural corporation D&T Farm.

Named Monge, meaning "super" in the Okayama dialect, the banana was developed based on Gros Michel — a variety that had been widely grown worldwide until about 50 years ago. Monge bananas are often sold out, even though a box of three sells for a hefty price of ¥4,860, as the pesticide-free fruit is gaining popularity for its rich and sweet taste and edible skin.

"I wanted to grow bananas myself so that I can eat them as much as I want," said Tanaka, explaining why he first set about the research in his 20s, at a time when bananas were a luxury food.

He used the funds he gained from his shipping and shipbuilding business to try cultivating bananas. He brought banana plants from Okinawa and planted them in a greenhouse warmed by a heater, but the plants failed to survive.

Then he came up with a different idea while watching a TV program about fossil cycads.

Since tropical plants survived the Ice Age, he thought if he put a banana plant in a similar environment, he might be able to bring out in banana plants the same ability to adjust to cold weather.

After failing to recover banana plants that had been placed in a freezer or in liquid nitrogen, he tried soaking parts of the plants in a special liquid and freezing them slowly by gradually decreasing the temperature of a freezer to minus 60 degrees Celsius over six months.

The plants that went through this freezing procedure managed to grow. In fact, he found that they grow faster than typical bananas and that more fruit can be harvested in a shorter period. He said the method could be used with other tropical plants, such as coffee beans and papayas, and that the crops can be cultivated mostly without pesticides.

Although the bananas can be cultivated outdoors, he grows them in a greenhouse to protect them from typhoons.

Tanaka established a company in 2015 and began full-scale production in 2017.

"I hope crops will be grown in cold places with large plots of land, such as Siberia, to provide food to people around the world," Tanaka said.

Japan Times

Myanmar Strawberry Farmers Reduce Losses with Japan's Cold-Chain Logistics

By Mami Saito

Nay Lin Tun (left) and his wife sort strawberries in Pyin Oo Lwin, central Myanmar, on April 6, 2018 before shipping them by refrigerated trucks to the commercial capital Yangon. | NNA/ KYODO

NNA/KYODO

Japanese expertise in cold-chain logistics is lifting the spirits of strawberry farmers in Myanmar, radically reducing damage due to poor transportation methods and heat before their produce is delivered to consumers in commercial capital Yangon. Refrigerated trucks supplied by Premium Sojitz Logistics Co., a Japan-Myanmar joint venture, transport strawberries daily from Pyin Oo Lwin in central Myanmar at temperatures that never exceed 8 degrees Celsius.

The city near Mandalay is known for its proximity to the country's largest strawberry fields, but the fruit has long been stored along with luggage on long-haul buses before being delivered to wholesale markets in Yangon.

Japanese trading house Sojitz Corp. group established the joint venture in 2015 with Premium Distribution Co., a subsidiary of retail and logistics firm City Mart Holding Co., to help the Myanmar partner modernize its wholesale operations.

Ichiro Uesawa, managing director of the joint venture, has arranged for Myanmar strawberry farmers to visit Japan so they can see the integrated food cold-chain from fruit producers through retail outlets.

Nay Lin Tun, a 33-year-old farmer, has expressed keen interest in Japan's modern logistics know-how. The adoption of refrigerated transportation is "rewarding, as we suffer less product losses than before," he said.

His strawberries are now sold at high-end supermarkets in Yangon, and are gaining a favorable reputation among consumers. He plans to switch from his current strawberry varieties to sweeter Taiwanese ones next season.

Saw Tun Min Kyaw — Pyin Oo Lwin's biggest strawberry farmer, who boasts a daily shipment of up to 3 tons — credits the Japanese refrigerated transport technology with equalizing the quality of strawberries and sharply limiting losses, from an average 25 percent loss of shipments in the past.

Premium Sojitz Logistics now collects nearly 60 percent of the total strawberry shipments from farmers in the city, which was formerly known as Maymyo, Uesawa said.

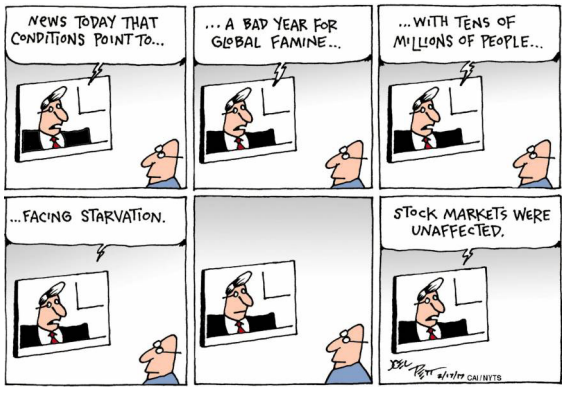
He also said his joint venture has decided to start exporting Myanmar strawberries by air to Thailand in January 2018. He added that the firm has also received inquiries about the transportation of vegetables and fresh flowers in Myanmar.

Japan Times

Why We Need a Food Revolution

By Bob Geldof

In 1984, I gathered the most successful musicians of the time to form a "supergroup" called Band Aid to raise money for famine relief in Ethiopia. The next year, an even larger grouping was formed for Live Aid, a major benefit concert and music-based fund-raising initiative that continues to this day. At last month's International Forum on Food and Nutrition, held by the Barilla Foundation, the enduring — and increasingly urgent — need for efforts to strengthen food security could not be more obvious.



The fate of the Easter Islanders illustrates the world's current problem. Sometime in the 12th century, a group of Polynesians found their way to a remote volcanic island where dense forests provided food, animals and the tools and materials to build hundreds of complex and mysterious stone sculptures. But, little by little, the people destroyed those forests, ultimately committing social, cultural and physical suicide.

Today, in relative terms, we collectively have only a small swath of forest left — and we are rapidly destroying it. We are running out of land to farm, and the desert is spreading. The food we produce is often wasted while almost a billion people do not have enough to eat — a reality that leaves many with little choice except to migrate.

Most media coverage focuses on refugees fleeing armed conflict (think Syria) or migrants seeking better economic opportunities than they have at home (think Nigeria or Pakistan). But the link between food scarcity and migration is stronger than it might seem to those who are not among the hungry.

For example, the Arab Spring uprisings of 2010-2011, which produced a massive wave of refugees, were triggered by a rise in wheat prices, which led to widespread bread riots that morphed into broader political revolutions. In fact, many armed conflicts, and the mass displacement they cause, can be traced back to food insecurity.

While the poor South starves, the rich North gorges. More than 2 billion of us are overweight, puffed up by low-energy sugars and mass-produced processed foods rich in fat. According to the Food and Agriculture Organization of the United Nations, just one-quarter of the food we throw out or squander each year would be enough to feed 870 million hungry people. Worldwide, one-third of all crops are wasted. Like the Easter Islanders of the past, we are setting ourselves up for self-annihilation.

Moreover, human-driven climate change threatens to intensify existing pressures affecting food supply and migration. In a report published last December, the European Commission's European Political Strategy Center predicted that ever-more frequent droughts and floods will "dwarf all other drivers of migration," with as many as 1 billion people displaced globally by 2050. Even the lowest estimate of 25 million climate-change migrants, the report warns, "would dwarf the current levels of new refugees and internally displaced persons."

To be sure, some steps are being taken to address food waste and scarcity. For example, this year, the European Commission proposed cuts in farm subsidies, which contribute to overproduction. But this approach — framed in terms of "evolution," rather than the "revolution" that is needed — is not even remotely adequate.

The European Union's common agricultural policy has long been highly problematic. The policy authorized tax money to be spent on growing surplus food, which was then warehoused (at further cost) and ultimately destroyed (at still further cost). The system has improved somewhat over the years, but not nearly enough. The farm bill in the United States — the federal government's primary agricultural and food policy tool — is similarly wasteful.

What is needed is not just a politically tolerable

adjustment to existing policies, but rather root-and-branch reform that emphasizes real results. Unfortunately, it is not clear whether there are any politicians up to the task, whether in the erratic and polarized U.S. or in the ineffectual European Parliament and Commission.

The time to step up was yesterday; the time to adopt a new approach is now. We can discuss the United Nations Sustainable Development Goals — which include targets like "halving per capita global food waste at the retail and consumer level, and reducing food losses along production and supply chains by 2030" — until we are blue in the face. What matters are well-designed, effective and comprehensive policies, implemented in a sustained manner. And those are nowhere to be found.

The Earth is 45 million centuries old, but our century is unique, because it is the first in which a species could destroy the entire basis of its own existence. Yet we latter-day Easter Islanders seem unaware of this existential threat, preferring to build statues rather than sustainable systems for survival.

Will we acknowledge our predicament only when our land becomes a desert, when our health systems collapse under the strain, when even the wealthy are facing food shortages, when freshwater becomes scarce and when our national shorelines are breached? By then it will be too late and our fate will be sealed.

The greatest threat to our planet is the belief that someone else will save it. Each of us must recognize the seriousness of our situation and demand real action to change it. That means you.

Bob Geldof is an Irish singer-songwriter, author and political activist. He is the founder and chairman of the Band Aid Trust for famine relief in Africa, and a member of the Africa Progress Panel. © Project Syndicate, 2018

TaiwaneseFarmers to Get Wider Coverage

By Sean Lin/Staff reporter

A farmer lights a firecracker to expel wild monkeys at a lychee farm in Pingtung County on May 14, 2018.
Photo: Tsai Tsung-hsien, Taipei Times

SAFETY NET: Lawmakers passed bills allowing farmers to enroll in the Occupational Injury Insurance scheme and entitling relatively wealthy farmers to public pensions

The Legislative Yuan on May 18, 2018 passed amendments to the Farmer Health Insurance Act on third reading, extending the coverage of the Occupational Injury Insurance to about 1.16 million farmers nationwide.

The Council of Agriculture (COA), which is responsible for the act, said that it would initiate a soft launch of the improved farmers' insurance system in November 2018.

Citing calculations by the council, COA Deputy Minister Chen Chi-chung said at a committee review of the amendments earlier in May 2018 that farmers covered by the Farmers' Health Insurance system would have to pay just an additional NT$14 (US$0.47) per month to enjoy the benefits offered by the Occupational Injury Insurance system.

Under the amendments, the insured is to shoulder 60 percent of the premium if their household registration is in one of the six special municipalities, while their local governments and the council would each pay 20 percent of the fee.

If the insured lives in another city or county, their local governments would shoulder 30 percent of the premium, while the council would provide the remaining 10 percent.

Farmers can decide whether they want to be included in the new insurance scheme, which offers the same terms by which the insured can claim compensation as they would under the Occupational Injury Insurance system: If the insured is injured or hospitalized due to work, becomes disabled because of an occupational hazard, or dies at work, in which case their family or beneficiaries would receive compensation equivalent to 30 times their monthly premium, or NT$306,000 (US$10,230).

Insured people who fraudulently claim compensation, such as by using falsified documentation or reports, are to be fined two times the compensation they have received and be credited for any ensuing legal liabilities, an amendment stipulates.

Democratic Progressive Party (DPP) Legislator Tsai Pei-hui said that farmers are exposed to a range of occupational hazards — such as heat stroke and injuries from the use of pesticides, herbicides or machinery — but for decades these hazards were overlooked by the government.

She lauded the legislation, saying that everyone toiling in the fields deserves the nation's support and protection.

In a related development, an amendment to the Temporary Statute Regarding the Welfare Pension of Senior Farmers also passed its third reading on May 18, 2018.

The amendment eased the "luxury clause" targeting farmers aged 65 or older who own properties worth NT$5 million or more, who, according to the former rules, were not eligible to receive farmers' pensions.

Farmers who own land that has been designated by the government as a reserved site for public infrastructure or had land that has been expropriated, but have not received reimbursements can deduct the value of their properties when their eligibility for receiving pension is reviewed.

Pensions are to be reinstated for farmers who have been excluded from the pension system due to increases in the assessed value of land or houses they own, provided that they have not bought or inherited any properties since January 1, 2018.

Additional reporting by Su Fang-ho

Taipei Times

Fukushima's Premium Sake Wins Worldwide Acclaim, As Brewers Eye Global Markets in Prefecture's Push for Recovery

By Masahiro Hidaka and Yuko Takeo

Bloomberg

In an area of Japan still decimated by nuclear disaster, sake is offering cause for hope.

For the past five years the sake brewers of Fukushima — on a two-decade quest to develop premium products — have captured the most gold medals in a key national competition, and have won numerous international awards. Drinkers worldwide have noticed the rising quality, and sake exports from Fukushima have more than doubled since 2012.

An employee stands in front of a rice steamer at a Suehiro Sake Co. brewery in Aizuwakamatsu, Fukushima Prefecture, on November 30, 2017. | BLOOMBERG

Now the prefectural government and local brewers are promoting their success. The hope is that Fukushima's champion sake — made from local rice and water — will serve as a symbol of the safety of local agricultural and fishery products and of prospects for the prefecture's broader revival.

"If we can show that Fukushima makes the best sake in the world, surely we can overcome the stigma," said Hiroyuki Karahashi, the president of Homare Sake Brewery Co., which won first place in the sake category at the 2015 London International Wine Challenge.

Fukushima's challenge is enormous. The earthquake, tsunami and nuclear meltdowns that devastated the region in March 2011 killed 4,000 people in Fukushima alone. Many of the 50,000 people forced to leave their homes have no plans to return. The local economy has been largely propped up by reconstruction spending in the years since, but that spending is expected to fall in the years to come.

Meanwhile, local companies still struggle with lingering public fears of radiation contamination. Only around 30 percent of businesses in the important fisheries and food processing sectors have seen their sales rise to pre-disaster levels, according to the nation's reconstruction agency.

All agricultural products from Fukushima — including every bag of rice — are tested for radiation using internationally accepted standards before shipment. Since 2015, no rice has registered radiation above the safety level, NHK has reported.

Still, 55 countries have some kind of restriction or requirement for additional documentation on imports of Fukushima products, according to the Foreign Ministry.

Takahiro Ichimura, a director of trade promotion at the Fukushima Prefectural Government who's spearheading the sake promotion efforts, said the importance of the ingredients in sake should help change people's perception of Fukushima.

"Water and rice are crucial," he said. "Once Fukushima's sake gains broader recognition and more people drink it, we think that overall appreciation for Fukushima should also increase."

The surge in sake exports follows a plunge in consumption in Japan — by half over the past 20 years — as consumers broadened their tastes.

Fukushima is trying to increase sales in the U.S. and Europe, including with promotional tours, Ichimura said. It has allocated ¥100 million ($880,000) this fiscal year to promote local sake at events in major cities in Japan and abroad, as well as at trade shows and promotional websites, in a campaign run by a private public relations agency. It plans to increase the budget 10 percent next year.

One event near Shinbashi Station, a Tokyo business area teeming with salarymen, drew 30,000 people this year — up from 20,000 last year, according to the prefecture.

Behind the brewers' recent success lies a shift in strategy toward premium products. Twenty years ago many of Fukushima's breweries produced cheap sake that included distilled alcohol, earning them a poor reputation in Japan's northeast, which is historically a major sake-producing region.

The prefectural sake academy, established in 1992, changed the game. The various breweries' heirs came together there to pool their secret brewing techniques, raising the bar for the entire prefecture. At one three-century old brewery the focus is now on using organic rice, while at another an older, more time-consuming technique to create yeast mash — a key ingredient — is being revived to improve flavor.

To be sure, changing Fukushima's image will be a struggle. While Japan's latest national budget included billions of yen for the purpose, 13 percent of Japanese respondents to a recent survey said they would hesitate before buying produce from Fukushima due to worries about radiation.

Ichimura remains optimistic.

"Fukushima's sake is a symbol of its recovery. It's managed to achieve results despite the odds," he said.

"My hope is that people will see this, and see how Fukushima is moving forward."

Japan Times

Skyline Farms Harvest More Happiness Than Food

By Kelvin Chan / Associated Press (AP), Hong Kong

Volunteers in November 2017 pick lettuce growing in rows of low black plastic planters on a decommissioned helipad on the roof of the 38-story Bank of America tower, in Hong Kong. March 29, 2018 | AP

Hong Kong's office workers get back to nature by growing and harvesting crops atop the skyscrapers studding the city's skyline

High above downtown Hong Kong's bustling, traffic-clogged streets, a group of office workers were toiling away not on a corporate acquisition or a public share offering but on harvesting a bumper crop of lettuce atop one of the skyscrapers studding the city's skyline.

It's rooftop farming taken to the extreme, and more about reaping happiness than providing food.

The volunteers were picking butter lettuce, Indian lettuce and Chinese mustard leaf in rows of low black plastic planters on a decommissioned helipad on the 146-meter-high roof of the 38-story Bank of America tower, the scenery: a vertiginous panorama of glass office towers framed by lush mountain peaks and Victoria Harbor.

"It's pretty dirty but still I really enjoy it," said Catherine Ng, one of five volunteers who work for the property company managing the tower.

The farm is run by Rooftop Republic, a three-year-old startup whose founders are tapping growing interest in organic food and taking advantage of unused roof space in the cramped, high-rent Chinese city.

Hong Kong, with its skinny office blocks and apartment towers and busy, affluent residents, might seem an unlikely place for rooftop farming to catch on. The finance and trading hub has rural suburbs, but farming only takes up 700 hectares of its land and agriculture accounts for 0.1 percent of its economic output.

Rooftop Republic's founders say the appetite for their services is growing among Hong Kongers who are seeking a more sustainable lifestyle and concerned about where their food comes from.

"We have been getting more and more interest from people who want to grow their own food," said Michelle Hong,

Tomatoes are planted in early March 2018 at a rooftop vegetable garden of an industrial building in Hong Kong. March 29, 2018 Photo: AP

one of the founders. "A lot of it is triggered by concerns about food safety and the realization that a lot of the food they consume might be laden with pesticides. I think people want to have more control and also more trust."

Hong Kong imports almost all of its food, much of it from mainland China. Public awareness about food safety in the former British colony has risen after countless food contamination scandals on the mainland.

Rooftop Republic has set up on average one farm a month since its founding and now manages 36 covering more than 2,800 square meters, including one in mainland China, Hong said. It also provides workshops for companies, building owners, schools and community groups.

The Bank of America farm was a milestone because it was the first in the city's financial district. The company has since set up two more in the area and is looking at a few more sites, Hong said. Vegetables from the tower are donated to a food bank for uses in lunch boxes distributed to the needy. Some of its other farms are at hotels or restaurants, which use the herbs, eggplants and melons for dishes on their menus.

Plenty of other groups or individuals have started cultivating their own rooftop vegetable gardens, said Matthew Pryor, a Hong Kong University architecture professor who has counted at least 60 and thinks there are a lot more he doesn't know about.

Pryor's research found approximately 1,500 rooftop farmers in the city, cultivating a total area of about 1.5 hectares. He thinks there's potential for that to easily grow to 50,000 people working on a suitable rooftop area of 600 hectares.

He helped set up a farm on top of a university building where volunteers, mainly staff, grow tomatoes, potatoes, strawberries, lettuce, dragonfruit, papaya, beans, peas and squash.

Pryor said he discovered through his research that their main product isn't edible.

"The rooftop farms here produce virtually nothing" compared to Hong Kong's overall consumption, Pryor said. "What they do produce, however, is happiness, and this social capital that

they generate is enormous."

The farms can help stressed-out, overworked and socially isolated Hong Kongers be happier and improve their well-being by letting them hang out with their friends and commune with nature.

Those benefits were on display at another Rooftop Republic farm at airline Cathay Pacific's headquarters near the city's airport on rural Lantau Island.

Airline staff planted crops that thrive in Hong Kong's cool, dry winter growing season, like kale, cabbage, radishes and carrots, which they can take home.

"We're right by the sea, we have great views of the harbor, at the same time have got great views of the airport. We see planes every two minutes," said volunteer Prian Chan. "So it's awesome to be here."

Taipei Times

Japan's Wineries Adapting to Tighter Grape Geographic-Origin Rules

By Kelvin Chan / Associated Press (AP), Hong Kong

JIJI

Some wineries are moving to change their product names containing geographical terms ahead of a tightening of place-of-origin rules aimed at preventing consumer misunderstanding.

Among them is Takeda Winery in Kaminoyama, Yamagata Prefecture. Its mainstay products include the Zao Star series. The brand name derives from the Zao mountain range, known for popular ski resorts and the tourist-attracting scenery of frozen snow-covered trees.

The winery will change the names of wines within that brand so they include Takeda Winery Rouge, starting with products made with grapes harvested in 2017.

The move is intended to meet a requirement that will be introduced Oct. 30 by the National Tax Agency stipulating that wine products with geographical names must be accurate for at least 85 percent of the grapes grown locally.

Crown Prince Naruhito is given a tour of Asahimachi Wine, a winery in Yamagata Prefecture, in July 2017. The firm is one of the wineries in Japan trying to cope with stricter place-of-origin rules expected to be introduced in October 2018. | POOL / VIA KYODO

In the Zao Star series, white and rose wines meet the new requirement, but red wines do not, as they use not only locally grown grapes but also grapes from Tendo, another city in Yamagata but somewhat distant from Zao.

Although Takeda Winery had the option of changing grape suppliers, it chose to maintain its contract with its current partner farmers in view of some 100 years of relations. It therefore decided to change the product indications instead of seeking new suppliers.

"The rule change will enable consumers to tell the places of origin clearly," Takeda Winery President Noriko Kishidaira, 51, said. "We accept the revised rule positively, seeing it as a good opportunity," she said.

At the same time, some wineries are trying to keep changes of product indications to a minimum.

Asahimachi Wine in the town of Asahi in Yamagata sells popular wine products carrying its corporate name.

As white wine products on its lineup use grapes from a different area of the prefecture, the winery last September placed a kanji character meaning "limited liability company" just ahead of the product name of Asahimachi Wine on the bottle labels.

By having the labels suggest that they show the name of the company, not the product names, the winery obtained the tax agency's green light for the indication.

"We've experienced a sales decline following a product name change," said Hidetoshi Konoe, 56, a plant manager at the winery. "That's why we tried as much as possible not to change the appearance of the labels."

Meanwhile, officials of the Yamanashi Prefecture Wine Manufacturers' Association said the rule change is expected to have only a limited impact on roughly 80 wineries in the prefecture, whose products are widely known as Koshu wine.

This is because Koshu is the name of a wine grape variety whose use in product names is authorized and its indication is allowed for wines made with the grape variety grown not only in the city of Koshu but also other areas in the prefecture, officials of the association said.

As product indications carrying the names of the places where wineries are located will also be allowed, Hokkaido Wine in Otaru, Hokkaido, has already changed the names of its Otaru Niagara wines that mainly use grapes grown outside the city but are made in the city to Otaru Jozo Niagara. Otaru Jozo means "brewed in Otaru."

"Overseas, wine products are sold under specific geographical names, such as Bordeaux and Bourgogne," said Minoru Kubono, 64, an official of the Japan Wineries Association. "Toughening the labeling regulations will help protect wine-producing regions."

Japan Times

As "Trial" Fishing Resumes, Fukushima Battles to Win Back Consumers

By Noriyuki Suzuki

Since the 2011 nuclear accident, fishery workers in Fukushima Prefecture have had an unprecedented and daunting undertaking to convince consumers that local fish are safe to eat. Fishing has resumed on a "trial" basis and catches have been gradually increasing. Seven years on, radiation checks are now part of their routine before they can be shipped to markets.

Japan has a cuisine culture that is often synonymous with "sushi" overseas, and consumers value not just the safety but freshness of seafood.

There is one thing that they have apparently learned the hard way: easing consumer anxiety takes more than just time and radiation checks. And it's still a work in progress.

"Who could have imagined such checks would become necessary before the accident?" said Tadaaki Sawada, an official with the local fishery association in Fukushima.

"It's possible to argue for the safety of fish by presenting the data we collect. But whether that can reassure consumers is a different story," Sawada said.

The March 11 earthquake and tsunami triggered the crisis at the Fukushima Daiichi nuclear power plant, forcing local fishermen to stop catching and selling fish off the northeastern prefecture.

That wreaked havoc on the fishing industry that enjoyed coastal and trawl fishing to catch bonito, tuna, saury and flatfish, among other species.

Two currents -- Kuroshio from the south and Oyashio from the north -- meet off Fukushima, creating good fishing grounds.

After rounds of radiation checks, the number of fish species allowed to be caught on a trial basis has increased from three over the years and all species can be fished except 10 including a type of sea bream and sea bass.

As the region marks the seventh anniversary since the disaster, a turning point came earlier in the month. Some 100 kilograms of flatfish were exported to Thailand for the first time, more than a year after flatfish fishing resumed.

Local officials hope that the practice will boost the morale of fishermen and help Fukushima rebuild its reputation and expand sales channels.

The current plan is to ship as much as 1 ton of flatfish -- a local delicacy that used to fetch high prices in Tokyo and beyond -- to Thailand. Japanese restaurants there will serve the fish, according to people involved.

Yusuke Ujike has been part of the efforts to promote Fukushima products in Thailand. But he admitted that exporting fresh fish felt like a "sensitive" issue at first.

"As a company doing business in the food industry, we know how important food safety is," said Ujike, president of Allied Corporation Co., a Yokohama-based trading firm.

Ujike looked into how radiation checks are conducted on fishery products before he became convinced. Tapping into overseas markets should be a viable strategy, he thought.

"I can't financially support the local industry but my hope is that exporting fish will become a catalyst for Fukushima," Ujike said.

The Japanese government set its maximum limit for radioactive cesium in sea produce and other food items at 100 becquerels per kilogram, which it says is stricter than international standards.

Since April 2015, no fishery products tested have exceeded the 100 becquerels per kilogram upper limit, according to the prefectural government.

The Fukushima Prefectural Federation of Fisheries Cooperative Associations, for its part, has set its own limit much lower at 50 becquerels per kg, beyond which shipments will be halted.

At fish markets in Iwaki, a coastal city in Fukushima, consumers have more access than before to locally caught fish. But the volume is still low, as total catches in 2017 accounted for just over 10 percent of what they used to be before 2011.

Chiharu Ando, the mother of a 6-year-old daughter, said her worries about Fukushima products have eased as her knowledge has expanded.

"I was pregnant back then and hesitated to eat fish for the first two years or so (after the crisis)," Ando said. "Now I know how food items are checked."

Recent surveys show the percentage of consumers saying that the origin of food items matters or somewhat matters fell from 68.2 percent in 2013 -- two years after the calamities -- to 62.9 percent in 2017.

When asked about the reason, 27.9 percent said they prefer buying items that do not include radioactive substances in 2013, which compares with 16.5 percent last year, according to the surveys targeting over 5,000 Japanese people in various parts of the country.

Certain progress has been made in eliminating the stigma attached to Fukushima. People in the fishing industry and risk communication experts acknowledge the importance of keeping consumers updated and publicizing as much information as possible.

As time passes, the challenges facing the local fishery

industry could be manifold.

More catches would mean revival of local fishing activity, but they will also raise the need for fishery workers to conduct more radiation checks.

Uncertainty is looming over whether fish from Fukushima will be fairly valued because increased supplies may result in lower prices.

"First off, it's important to see locally caught fish return to the shelves where they used to be, and hopefully sold in the same price range as before," said Sawada of the local fishery association.

"We've come this far since the crisis but there is still a long way to go toward full-fledged fishing," he added.

Kyodo News

Tokyo-Based Bus Firm Brings Fresh Local Produce, As Well As Passengers, From Rural Gifu

Chunichi Shimbun

A sales clerk at a supermarket in Tokyo's Suginami Ward stacks shelves with vegetables delivered by highway express bus from Takayama, Gifu Prefecture. | CHUNICHI SHIMBUN

A man in Takayama, Gifu Prefecture, holds a container full of vegetables produced locally, ready to be loaded onto Keio Group's highway express bus, seen parked behind, for transport to Tokyo. | CHUNICHI SHIMBUN

Highway express buses between the city of Takayama in Gifu Prefecture and Tokyo are being used to transport fresh fruit and vegetables to supermarkets in the metropolis.

As the distribution industry is facing a severe manpower shortage, companies are coming up with new ideas that clear hurdles between passengers and cargo, and enable the delivery of people and goods at the same time.

This benefits farmers because they can promote their products in the metropolis, as well as bus operators because it provides them with a new source of income.

At Kitchen Court Eifukucho, a supermarket within the building of Eifukucho Station on the Keio Inokashira Line, rows of spinach, white leeks, taranome (young buds of angelica trees) and other vegetables fill the fresh produce section with a banner promoting the Hida Takayama region.

The vegetables were grown by farmers in Takayama and were transported using highway express buses operated by Tokyo-based Keio Group.

Since September 2017, roughly 100 kilograms of vegetables have been delivered by bus to the supermarket twice a week.

"I bought their leeks and carrots before and they were very delicious," explained a 77-year-old housewife as she picked out some shiitake.

The Takayama Municipal Government and Keio began considering the use of highway express buses to transport vegetables after working together on a project to attract foreign tourists.

Highway express buses are allowed to transport cargo of less than 350 kg, so the company does not even have to take advantage of recent deregulation allowing mixed passenger/cargo buses.

They prepared double-layered containers that can block the heat, to keep the vegetables fresh. The containers are kept in the storage compartment generally used by the bus crew, which is under the passengers' seats.

According to Keio, it is rare to use long-distance highway express buses to transport products.

The vegetables are collected in Tokusenkan Ajika, a farmers' store in Takayama, and loaded onto a Keio highway bus at around 9:30 a.m. at the Takayama office of Nohi Bus, a local bus operator.

After the passengers get off shortly after 4:00 p.m. at Shinjuku Expressway Bus Terminal, the biggest bus terminal in Tokyo, the bus then goes to a highway bus office close to the supermarket to unload the vegetables. The next morning, they are placed on display at the store ready to be sold.

According to the supermarket staff, the vegetables are very popular and almost always sell out.

"Hearing that vegetables from Hida are popular in Tokyo motivates me to produce better vegetables," said Kenji Okada, 70, a farmer who grows leeks, with a smile.

Keio is thinking of increasing the number of supermarkets that will offer vegetables from Takayama and expanding the system to other regions.

Efforts to increase the efficiency of distribution by delivering passengers and cargo together are gaining attention as the industry is suffering from a shortage of bus and truck drivers.

The transport ministry announced a deregulation measure in September 2017, allowing bus operators and taxi companies that acquire a cargo business license to deliver cargo under certain conditions.

Cargo operators are also allowed to carry passengers if they obtain a permit.

The ministry hopes the move will help maintain the transportation and distribution networks in underpopulated areas.

In the Tokai region, Yamato Transport Co., the largest home delivery service provider in Japan, has paired with Gifu-based Nagaragawa Railway Co. to transport products by rail.

In the city of Toyota in Aichi Prefecture, Yamato's packages are carried by the local Toyota Oiden Bus.

In 2017, the Chubu District Transport Bureau conducted a field test using an express bus to carry tourist luggage from a hotel in Takayama to a hotel in the city of Matsumoto, Nagano Prefecture.

"With the growth of e-commerce, the amount of cargo transport is expected to continue increasing in the future, so there is a need to boost efficiency in distribution and transportation while gaining the understanding of passengers," said Hirohito Kuse, professor of Ryutsu Keizai University specializing in distribution system.

"Carrying passengers and cargo together is proving effective also for long-distance transportation such as highway express buses," he said.

Japan Times

Aichi Team Develops Self-Driving Robots to Tackle Labor Shortage in Farming

Chunichi Shimbun

A self-driving, handcart-type robot, being developed to support farmers who grow flowers, is seen at Toyohashi University of Technology in Toyohashi, Aichi Prefecture. | CHUNICHI SHIMBUN

Amid a severe shortage of manpower, a team comprised of researchers from private companies and a university in Aichi Prefecture is working on developing a self-driving robot that uses cutting-edge technology to support flower-growing farmers.

In fiscal 2019 the group hopes to start marketing automated, handcart-type robots that follow pickers of roses and chrysanthemums, carry the cut flowers, and deliver them to collection points.

In a laboratory at Toyohashi University of Technology in Toyohashi, a roughly 1-meter-high handcart-type robot — equipped with three cameras and two infrared radar devices — moves back and forth, changing direction smoothly.

The robot, which recognizes its location through camera footage, can self-drive on the farm grounds or inside greenhouses, follow flower pickers while keeping a certain distance, collect picked flowers, and carry them to designated collection points.

Following flower pickers and transporting cut flowers became possible through the use of autonomous driving technology that involves the 3D mapping of farm grounds.

Institutions from which researchers are participating in the development team include Sinfonia Technology Co., an electric appliances manufacturer which has its main factory in Toyohashi, and Aichi Agricultural Research Center. The project started in fiscal 2016 with a subsidy from the prefectural government to support next-generation robot development.

Among Japan's 47 prefectures Aichi has maintained the top position in flower shipments for 55 years in a row. In fiscal 2016 the value of shipments reached ¥57.2 billion, accounting for 16 percent of the nation's total.

However, the industry has recently faced a shortage of workers due to the aging of farmers, and growers have become alarmed by an increase in imports of flowers mass produced in countries where labor costs are lower. The robot project began in response to farmers' hopes to further improve work efficiency.

"Handcart-type robots are highly versatile as they can be used in sectors other than the flower industry, such as picking fruit and vegetables and delivering components inside factories. We expect strong demand for the product," said Mitsuo Tsume, 69, who heads Sinfonia Technology's new project planning division.

The labor shortage in the agriculture industry is worsening as each year passes. According to farm ministry statistics, the number of laborers working on the nation's farms fell by about 50 percent over the last decade, dropping from 3.12 million in 2007 to 1.81 million in 2017, and is expected to continue declining. The average age of Japanese farmers is climbing; it reached 66.6 years old in 2017.

Major farm machinery manufacturers are working hard

to develop self-driving vehicles and other products to facilitate automation in agriculture.

Kubota Corp. began trial sales in 2017 of its self-driving robot tractor that plows the land using GPS data. Similar robots have also been developed by rivals Yanmar Co. and Iseki & Co. The companies are also aiming to sell automated machines for rice planting and harvesting.

This section, appearing Tuesdays, features topics and issues from the Chubu region covered by the Chunichi Shimbun. The original article was published June 15, 2018.

Japan Times

Bran Could Reduce Blood Pressure, Researchers Say

By Lin Hui-chin and William Hetherington
Staff reporter, with staff writer

COLORED GRAINS: Researchers found that bran is 59 times more effective than brown rice in inhibiting enzymes that control blood vessel wall contractions

Eating bran could help lower blood pressure, the Council of Agriculture of Taiwan said on June 3, 2018, citing research it conducted on the effects of brown rice and similar grains on the circulatory system.

Researchers examined the ability of the grains to inhibit the contraction of arteries, the council said, adding that bran was most effective at doing so, followed by brown rice and white rice. The results were surprising, given that bran is traditionally used by Taiwanese as animal feed rather than for human consumption, it said.

Researchers were looking for a way to inhibit vasoconstriction — the narrowing of blood vessels due to contractions of their muscular walls, said Yang Shu-hui, an assistant researcher at the council's research facility in Kaohsiung's Fengshan District.

Vasoconstriction occurs when enzymes catalyze angiotensin — a hormone that helps regulate blood pressure — resulting in increased blood pressure, Yang said, adding that finding a substance that could inhibit this catalyst could be used to treat hypertension.

Many researchers have explored the potential of natural foods to inhibit angiotensin catalysis, so the team sought to

determine how effectively domestically grown colored grains perform this function, she said.

The team directly applied elements within the grains to the enzymes to measure their effects, she said.

The research found that while colored grains in general are much more effective than rice at inhibiting catalysis, bran in particular tested 59 times more effective than the next closest grain, brown rice, Yang said.

While bran might not be practical as a replacement for rice, it might be possible to create beverages with it, she said, adding that people could mix brown and white rice and cook them together.

Grain products differ only by the amount of processing, Agriculture and Food Agency specialist Juang Lao-dar said.

For example, brown rice is produced by removing the inedible outer hull, but retaining the outer bran layer and cereal germ, while white rice is the same grain of rice with the bran and cereal germ removed, Juang said.

Brown rice is also a good source of magnesium, phosphorus, selenium, thiamine, niacin, vitamin B6, manganese and fiber, he added.

While there have been many research projects focused on the benefits of whole grains for people with high blood pressure, high cholesterol and other conditions, those with kidney and intestinal problems should exercise caution, John Tung Foundation Food and Nutrition Division director Hsu Hui-yu said.

People with health conditions to consult a nutritionist before increasing their intake of colored grains, Hsu added.

Taipei Times

Company Champions Unsightly Fruit and Veg

Wowprime chairman Park Chen, right, and company president Annie Yang, in Taipei on March 27, 2018 reveal plans to promote restaurants with ugly fruits as the main ingredients. Mar 29, 2018 Photo: CNA

To address the threat of a global food shortage crisis, when every year large amounts of fruit and vegetables are discarded because they are deemed unsightly or deformed, Taiwan's Wowprime chairman Park Chen announced on March 27, 2018 that the company would promote restaurants in 2018 with unsightly veg as the main ingredients.

Many fruits and vegetables are marked as substandard at the production stage as they fall short of market standards and are deemed too unsightly to be put on sale. The disposal rate of these fruit and veg is as high as 30 percent, and they are discarded simply because they have flaws in their appearance. This is wasteful, especially when the nutritional composition of these is no different from fruit and veg with a more immaculate appearance.

According to reports, the world may well be facing a catastrophic food crisis by 2050. After researching the issues of food scraps and sustainable development of soil fertility, the group discovered that in 2015 agricultural wastage in Taiwan was as much as 4.6 million metric tonnes, most of which was vegetables, with fruit coming second.

Taipei Times

Lonely Furrow: Pay Dirt Eludes Organic Farms in Japan

By Anne Beade

Farmer Yuya Shibakai works at his organic vegetable farm in Inzai, Chiba Prefecture, on May 24, 2018. | AFP-JIJI

Workers prepare packages of organic vegetables at a farm in Inzai, Chiba Prefecture, on May 24, 2018. | AFP-JIJI

AFP-JIJI

Yuya Shibakai sometimes feels he is plowing a lonely furrow.

The Japanese farmer produces organic lettuce, tomatoes, carrots and other vegetables for a market that has tasted nothing like the success of the sector in other advanced economies.

On his farm outside Tokyo, the 32-year-old doggedly trudges along a line of lettuce heads, pulling up weeds by hand.

Shibakai said it is a "daily struggle to find ways to make a profit using a system you could call inefficient, where you have to pull all the weeds out by hand.

"We need a different supply system in Japan, a sustainable structure for farmers that would also change the way our profession is seen," said Shibakai, who took over the business from his parents in 2009.

Organic farming occupied just 0.5 percent of Japan's entire arable land in 2016. The country hopes to double this by 2019, said Akimi Uenaka, an official in charge of organic farming at the agriculture ministry.

However, Uenaka admitted the development of the sector in Japan was "slow," as weeding and pest control take more time and organic farms struggle to produce a "stable" output due to technical limitations.

Shibakai is one of 12,000 organic farmers in the whole country, according to statistics from 2010, the last time the agriculture ministry collected figures from the nascent sector.

While the craze for healthy eating has fueled lucrative sales around the world, the market for "bio," the nickname for organic food in Japan, is estimated to be worth just over $1 billion.

The world's third-largest economy has a mere fraction of the global market of around $90 billion and is dwarfed by the U.S. ($45 billion), Germany ($11 billion), France ($8 billion) and China ($7 billion).

But while even most of these mature markets are enjoying solid growth, the sector in Japan is stagnating.

One of the few players to dip a toe into the market is French organic retailer Bio c'Bon, which has had a presence in Japan since the end of 2016 and just opened its third shop in Tokyo.

A dearth of large-scale farming means the company has to work with around 200 individual farms for its fruit and vegetables and even import other goods — for example raspberries from Mexico, as well as organic wines and cheeses from France.

One of the problems faced by shops offering organic food is a Japanese obsession with how fruit and vegetables look and are packaged.

"Especially during the week, Japanese customers tend to shop very quickly and grab pre-packaged and pre-weighed goods," said Pascal Gerbert-Gaillard, Asia director at Bio c'Bon.

"We are working to find a good balance between our brand and Japanese consumption habits," he added.

As an example, he said his staff minutely check for any tiny imperfection in their vegetables and remove them from sale. They are donated to staff.

Gerbert-Gaillard said organic food is gradually finding a market among "Japanese aged between 30 and 40, especially mothers, and expats."

The firm has ambitious plans to grow its "minuscule offerings" by expanding to "around 30 shops in Tokyo and its suburbs before the 2020 Olympics," he said.

But well-established smaller players have already found that organic food can be slow to gain traction.

Rika Oishi founded her organic firm SuperOrganic in 2011, hoping to capitalize on a boom in demand — especially from foreigners — for "healthy" food after the Fukushima earthquake and nuclear meltdowns.

"I have noticed a bit more interest down the years from consumers and firms, but it has not yet become a way of life," she said.

Japan Times

About CACCI

The Confederation of Asia-Pacific Chambers of Commerce and Industry (CACCI) is a regional grouping of apex national chambers of commerce and industry, business associations and business enterprises in Asia and the Western Pacific.

It is a non-governmental organization serving as a forum for promoting the vital role of businessmen in the region, increasing regional business interaction, and enhancing regional economic growth. Since its establishment in 1996, CACCI has grown into a network of national chamber of commerce with a total now of 29 primary Members from 27 Asian countries and independent economies. It cuts across national boundaries to link businessmen and promote economic growth throughout the Asia-Pacific region. CACCI is a non-governmental organization (NGO) granted consultative status, Roster category, under the United Nations.

It is a member of the Conference on NGOs (CoNGO), an association of NGOs with UN consultative status.

Among the benefits of membership in CACCI are the following:

1. Policy Advocacy - CACCI aims to play a strong policy advocacy role in order to establish a business environment conducive to creating better opportunities for CACCI members.

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